

REMARKS

Claims 1-18 were rejected. Claims 1, 6, 12, 14 and 18 have been amended and Claim 13 has been canceled, leaving Claims 1-12 and 14-18 pending in the present application. In addition, the abstract has been amended. No new matter has been added by the amendments and support for the amendments can be found in the entire specification, for example, on lines 2-6 of page 5 of Applicants' specification.

Specification Objections:

The abstract of the disclosure was objected to because the abstract exceeds 150 words in length. The abstract has been amended to comply with 37 CFR 1.72.

Further, Claim 6 was objected to because of informalities. Claim 6 has been amended to replace "an" in line 2 with "a".

Thus, withdrawal of the specification objections is respectfully requested.

Claim Rejections under 35 U.S.C. § 112:

Claims 1-18 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

More particularly, Claim 1 was rejected due to a lack of antecedent basis for the limitation "the minimum number" in line 5. Claim 1 has been amended to replace the limitation "the minimum number" in line 5 with "a minimum number".

Claim 12 was rejected due to a lack of antecedent basis for the limitation "the internal floating point format" in line 7. Applicants respectfully point out that line 4 of Claim 12 recites "an internal floating point format." Therefore, there is antecedent basis for the limitation "the internal floating point format" in line 7 of Claim 12.

Claim 18 was rejected due to a lack of antecedent basis for the limitation "the instant floating point architecture" in line 8. Applicants assume that the Examiner indicates the limitation "the instant floating point architecture" of line 3 instead of line 8. The limitation "the instant floating point architecture" in line 3 has been amended to recite "a type of a floating point architecture".

The amended Claims 1, 12 and 18 are believed to satisfy the antecedent basis

criteria of 35 U.S.C. § 112, second paragraph. Claims 2-11 depend from Claim 1, and Claims 13 and 15-17 depend from Claim 12. These claims are believed to be allowable due to their dependencies on Claims 1 and 12.

Claim Rejections under 35 U.S.C. § 102:

Claims 1-4 and 6-18 were rejected under 35 U.S.C. § 102(b) as being anticipated by Schwarz et al., US 5,687,106 (hereinafter "Schwarz") for the reasons stated on pages 3-7 of the Office Action.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."

Verdegaal Bros. V. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the * * * claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). This rejection is traversed because each and every element of Applicants' Claim 1 is not found, either expressly or inherently described in Schwarz.

More particularly, the element "wherein said converting into the internal floating point format occurs without incurring additional clock cycles when said one of the plurality of floating point architectures is binary and said converting into the internal floating point format occurs without incurring additional clock cycles when said one of the plurality of floating point architectures is hexadecimal" as recited in Claim 1 is not found, either expressly or inherently described in Schwarz.

Schwarz teaches a computer system supporting multiple floating point architectures that is optimized for a hexadecimal format. The floating point unit described in Schwarz utilizes a hexadecimal internal dataflow with an exponent and a bias sufficient to support a binary floating point architecture. (See Schwarz Abstract.) Schwarz describes the hexadecimal to internal format conversion as "conversion is rather straight forward given the representation of hex architected ... to hex internal notation" and that "no extra stages are required for this conversion which is performed in parallel on both input operands." (See Schwarz, col. 4 lines 6-15.)

Schwarz goes on to describe the processing necessary to convert from binary external data to the internal format as requiring an extra clock cycle for conversion. (See Schwarz, col. 4 lines 42-53.) As recited in Schwarz "A register 13 receives the data and either transmits the result in the following cycle to the hex internal dataflow 18 if the operand was in hex format or transmits it to a binary architected to hex internal converter 15 which then transmits the result back to A register 13 and in the following cycle is transmitted on to the hex internal dataflow 18." (See Schwarz, col. 4 lines 42-47 and Fig. 1.) Hence, Schwarz requires an extra clock cycle when converting binary input data to the internal format. Therefore, Schwarz does not teach "said converting into the internal floating point format occurs without incurring additional clock cycles when said one of the plurality of floating point architectures is binary" as recited in Claim 1. For at least this reason, Claim 1 is patentable over Schwarz.

Claims 12 and 18 are believed to be patentable over Schwarz for at least the reasons given for Claim 1. Claims 2-11 depend from Claim 1 and Claims 14-17 depend from Claim 12, thus these claims are believed to be patentable over Schwarz due to their dependencies on Claims 1 and 12.

Claim Rejections under 35 U.S.C. § 103:

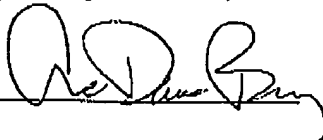
Claim 5 was rejected under 35 U.S.C. § 103(a) as being obvious over Schwarz for the reasons stated on pages 7-8 of the Office Action. Applicants respectfully disagree with the Examiner. As described above with regard to the claim rejections under 35 U.S.C. § 102(b), Schwarz does not teach all the claim limitations of Claim 1. Thus, Schwarz does not render Claim 1 obvious. Claim 5 depends from Claim 1 and is believed to be patentable over Schwarz due to its dependency on Claim 1.

Conclusion

In view of the foregoing remarks, Applicants submit that this application is in condition for allowance. Early notification to this effect is requested.

If there are any charges due in connection with this response, please charge them to Deposit Account 09-0463 maintained by Applicants' Assignee.

Respectfully submitted,

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